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A similar proportion of the lines that are weakened in sun-spots are weakened under the same conditions. We have also found that the lines whose intensities are unchanged in sun-spots are, speaking generally, unchanged under the conditions named. As a further fact, of great importance in its bearing upon the temperature of the vapors in sun-spots and the classification of stellar spectra, we also find that over 90 per cent of all the "enhanced" (spark) lines included in our tables are weakened or absent in the two-ampere arc and in the flame.

We conclude that the temperature of the vapors in sun-spots is probably below that of the same vapors in the ordinary reversing layer. As we have recently shown that the spectra of third-type stars closely resemble spot spectra, and as this resemblance is greatly enhanced through our recent discovery of the titanium oxide fluting, which begins at λ 5597.9, in our photographs of spot spectra, further investigations along these lines seem likely to prove fruitful.

George E. Hale,
Walter S. Adams, and
Henry G. Gale.

Finlay's Periodic Comet (1906 *d*).

This comet was discovered by Finlay in 1886. It returned to the Sun in 1893 and 1900, and was rediscovered on its third return by Kopff, of Heidelberg, on the morning of July 17, 1906. A search ephemeris had been computed by M. Fayet, of Paris, and published in the same number of *Astronomische Nachrichten* with the printed announcement of discovery.

The comet was looked for at the Lick Observatory on July 20th, when it was easily seen in the 3-inch finder of the 12-inch equatorial. Since then it has been observed a number of times, the last at present writing (September 20th) being on September 16th. From the time of rediscovery it grew continuously brighter until about the middle of August; since then it has grown fainter, but at no time was it visible to the naked eye. On July 20th there was a faint nucleus of about the twelfth magnitude, surrounded by a diffuse nebulous mass. This condensation was barely of magnitude 13.5 on September 16th. No tail had been found at the time of the last observation.

E. A. Fath.

September 20, 1906.

REOBSERVATION OF *PHŒBE*, THE NINTH SATELLITE OF *SATURN*.

The first photograph of *Phœbe* at the present opposition was secured with the Crossley reflector on July 18th.

The position of the satellite at 14^h 41^m 23^s, P. S. T., was

α	23^h	5^m	$12^s.85$
δ	$-7°$	$59'$	$36''.0$

or, with respect to *Saturn*,—

1^m	$10^s.35$	west
$6'$	$53''.5$	south

This position is within 1^s in α and $0'.1$ in δ of the place predicted for it by Dr. Ross.

Other observations were secured on July 19th, 20th, August 14th, 16th, and 17th. *Phœbe* is now too close to *Saturn* for observation with the Crossley.

C. D. PERRINE.

September 12, 1906.

REOBSERVATION OF *JUPITER'S* SIXTH SATELLITE.

The first observation of the Sixth satellite, at the present opposition, was secured on August 26th. Its position at 15^h 10^m 30^s, P. S. T., was

R. A.	6^h	21^m	$24^s.99$
Decl.	$+22°$	$38'$	$32''.0$

Its position with reference to *Jupiter* was—

Position-angle	210°	$14'$
Distance		$29'.0$

September 14, 1906.

C. D. PERRINE.

NOTE ON COMET *e* 1906 (KOPFF).

The fifth comet of this year was discovered near opposition August 22d by KOPFF at Heidelberg. Three observations by Mr. FATH, on August 24th, 25th, and 26th, were kindly telegraphed to the Student's Observatory by Director CAMPBELL. These revealed a very slow motion. From them a preliminary orbit was deduced, which has been printed in *Lick Observatory Bulletin*, No. 99.

A second orbit based upon observations made by Mr. FATH, August 24th, September 5th, and September 15th, has just